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REMARKS

The application has been reviewed in light of the Office Action dated February 3, 2006. Claims 1-54 were pending. By this Amendment, claims 4-7, 13-16, 22-25, 31-34, 40-43 and 49-52 have been canceled, new dependent claim 55 has been added, and claims 1, 10, 19, 28, 37 and 46 have been amended to clarify the claimed invention. Accordingly, claims 1-3, 8-12, 17-21, 26-30, 35-39, 44-48 and 53-55 are now pending, with claims 1, 10, 19, 28, 37 and 46 being in independent form.

Claims 4-7, 13-16, 22-25, 31-34, 40-43 and 49-52 were rejected under 35 U.S.C. §112, first paragraph, as purportedly failing to comply with the enablement requirement. Claims 4-7, 13-16, 22-25, 31-34, 40-43 and 49-52 were rejected under 35 U.S.C. §112, second paragraph, as purportedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

By this Amendment, claims 4-7, 13-16, 22-25, 31-34, 40-43 and 49-52 have been canceled. Accordingly the rejections under 35 U.S.C. §112 are now moot.

Claims 1 and 3 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Japanese Patent Application Publication No. 10-333852 (Wada et al.) in view of U.S. Patent Application Publication No. 2002/0060675 A1 (Hashimoto). Claims 5, 14, 23, 32, 41 and 50 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Wada in view of Hashimoto and further in view of U.S. Patent Application Publication No. 2003/0179200 A1 (Martin et al.). Claims 6-9, 15-18, 24-27, 33-36, 42-45 and 51-54 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Wada in view of Hashimoto, and further in view of U.S. Patent Application Publication No. 2003/0152272 A1 to Venable. Claims 2, 11, 20, 29, 38 and 47 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Wada in view of

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Hashimoto, and further in view of McIntosh, "Postscript: A Page Description Language".

Applicant has carefully considered the Examiner's comments and the cited art, and respectfully submits that independent claims 1, 10, 19, 28, 37 and 46 are patentable over the cited art, for at least the following reasons.

This application relates to image processing techniques for accelerating an image overlay process wherein graphic rendering instructions are sequentially processed, and a first graphic rendering instruction is input immediately preceding a second graphic rendering instruction. In some instances of such image processing, one image (for example, a graphical figure) is overlaid by a second image (for example, another figure):

Unlike conventional techniques which typically communicate, and then process, the image data for the first image in its entirety as well as the image data for the second image in its entirety, the improved image processing apparatuses of this application (a) detects image overlay (that is, the first image is overlaid by the second image) and then (b) omits the overlaid portion of the first image. Thus, communication and processing resources can be conserved.

Wada, as understood by Applicant, is directed to an image processing technique applying parallel processing methods. In the system proposed by Wada, image data are organized as data objects, and the stored data may be intermediate data which is at a level of abstract higher than the data needed for plotting-output. Therefore, the intermediate data must be expanded before being sent to the plotter. Wada proposes performing the expansion of multiple objects in parallel. However, as indicated in Wada, overlap between objects must be identified because such overlap portions would not sent to expansion. Wada proposes that the portion constituting overlap is processed according to the respective priorities of the overlapping objects.

Therefore, it is clear that the technique of Wada does not involve graphic rendering

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instructions that are sequentially processed, and a first graphic rendering instruction is input immediately preceding a second graphic rendering instruction.

Hashimoto, as understood by Applicant, is directed to a software tool wherein selected image pages are displayed in overlapped fashion to allow an operator to visually confirm a processing area or range for a predetermined image processing, and then remove, move or insert an image in the selected area. Hashimoto does not involve image overlay, that is, a specified portion of a first original image to be overlaid by a second original image is deleted and a third output image is drawn, based on the first original image, in which the specified portion of the first original image is deleted.

Martin, as understood by Applicant, is directed to a method for activating the filling of a graphical object which is rasterized.

Venable, as understood by Applicant, is directed to a method for processing overlapping images, such as for a scanner or copier, including detecting the overlapping images, detecting boundaries of the images and processing the images to reduce bleeding of edges of the images.

McIntosh, as understood by Applicant, is directed to the POSTSCRIPT page description language.

Applicant simply does not find disclosure or suggestion by the cited art, however, of an image processing apparatus comprising an overlay detector and a memory, wherein the first and second graphic rendering instructions are sequentially processed, and the first graphic rendering instruction is input immediately preceding the second graphic rendering instruction, and wherein the overlay detector performs overlay detection to detect an overlay of the first and second original images which are rendered based on the first and second rendering data by the first and second rendering instructions, respectively, specifies a portion of the first original image to be

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overlaid by the second original image upon detecting an overlay of the first and second original images, deletes a specified portion and draws a third output image, based on the original images, in which the specified portion of the first original image is deleted and stores the second rendering data into the memory, as provided by independent claim 1.

Independent claims 10, 19, 28, 37 and 46 are patentably distinct from the cited art for at least similar reasons.

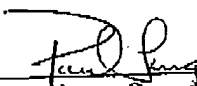
Accordingly, for at least the above-stated reasons, Applicant respectfully submits that independent claims 1, 10, 19, 28, 37 and 46, and the claims depending therefrom, are patentable over the cited art.

In view of the amendments to the claims and remarks hereinabove, Applicant submits that the application is now in condition for allowance. Accordingly, Applicant earnestly solicits the allowance of the application.

If a petition for an additional extension of time is required to make this response timely, this paper should be considered to be such a petition. The Office is hereby authorized to charge any fees that may be required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,


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